

REMARKS

Favorable reconsideration and allowance of this application are requested.

Claims 17-71 remain pending herein for consideration. In this regard, claims 17-46 have received an action on the merits, while claims 47-71 are stated as being "withdrawn". Several of claims 17-46 have been amended so as to address the Examiner rejections under 35 USC §112.

I. Request for Issuance of Restriction Requirement

Although a restriction requirement was advanced during prosecution of now abandoned parent application Serial No. 10/038,769, a similar restriction requirement has not been advanced in the subject application. In this regard, it was assumed that a similar restriction requirement would probably be advanced during prosecution of the subject continuation application and for such reason a provisional election was made in the Second Preliminary Amendment dated November 10, 2003. It seems apparent that the Examiner has in fact intended for a formal restriction requirement to be issued in this application. However, to date no such requirement has been advanced on the record.

Accordingly, the Examiner is requested to advance a formal restriction requirement if indeed that was his intent, in which case applicants confirm the provisional election of method claims 17-46. (Alternatively, of course, an action on the merits of all pending claims 17-71 should be issued should a restriction requirement not have been intended.)

Provisionally non-elected claims 47-71 remain pending herein for the time being while the restriction issue is resolved. The Examiner is, however, authorized to cancel the same without prejudice to the applicants' 35 USC §121 rights should this application otherwise be deemed in condition for allowance, provided of course that the Examiner advances a formal restriction requirement on the record as requested herein.

II. Response to 35 USC §112 Issues

Claim 23 has been revised so as to delete therefrom the reference to "salts".

Claim 43 has been revised in the manner suggested helpfully by the Examiner.

Applicants are, however, confused by the Examiner's objection with regard to claim 41 on the basis that claim 39 does not have any "polymer" recited. Specifically, the last two lines of claim 39 specifically provides antecedent basis for the language in claim 41 relating to a polymer which contains vinyl ester monomers as its principal components.

Withdrawal of the rejection advanced against claims 23, 41 and 43 based on 35 USC §112 is therefore believed to be in order.

III. Response to 35 USC §103(a) Issues

Several rejections have been advanced against claims 17-46 based principally on the applied Aho et al reference (WO 98/54,410). Specifically, claims 17-44 have been rejected as obvious over Aho et al, while Niinikoski et al and Hormi et al have been separately combined with Aho et al to reject claims 45 and 46, respectively. Applicants suggest that the applied references of record fail to render obvious the claims pending herein.

The Examiner admits in the penultimate paragraph of page 3 of the Official Action that:

"Aho does not specifically mention a size fraction and a pigment fraction."

Notwithstanding this disclosure deficiency in Aho, the Examiner asserts in the ultimate paragraph on page 3 of the Official Action that one of ordinary skill in this art would have obviously arrived at the subject invention since it allegedly:

“...is a well-known practice in the art to blend certain ingredients of a composition (out of all the ingredients) in few batches and then combine these batches to get the final product in order to facilitate smooth handling, to reduce cost of production and to get the final product of desired properties.”

Applicants suggest that Aho et al unequivocally cannot render obvious the claims pending herein.

At the outset, the Examiner's comment that it is "...a well-known practice in the art to blend certain ingredients...into few batches or fractions and then to combine these batches to get the final product" amounts to impermissible speculation which, in and of itself, is clear reversible error.¹ *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002). As the Court noted in *Lee*:

"In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the examiner and the Board are presumed to act from [the viewpoint of 'the person having ordinary skill in the art to which said subject matter pertains'].
Thus, when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulate and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The [examiner and the] board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but

must set forth the rationale on which it relies." *Id.* at page 1435, emphasis added.

Accordingly, for at least the reason noted immediately above, the rejection of claims 17-44 advanced under 35 USC §103(a) on the basis of Aho et al alone must be withdrawn. There are, however, additional factual/legal reasons that mandate withdrawal of such rejection.

The Examiner will recall that the present invention relates to **method** of making a size composition for the surface sizing of the paper, board or the like. The size composition is made by forming a ready-made, pre-mixed pigment fraction by premixing together (a) a mineral material (which mainly comprises talc particles and/or other phyllosilicate particles) and (b) a binder. The final size composition is thus prepared by mixing together a size fraction comprised of a water-soluble principal component and the premixed pigment fraction.

The inventors have surprisingly discovered that, by mixing a pigment fraction (which may per se be known) to a size composition (which also can be known per se), a size composition with much better properties can be obtained. Specifically, size compositions according to the present invention are much easier to make as compared to conventional surface sizes which are provided in the first instance with pigment particles. Additionally, the size compositions achieve better barrier properties in the sized paper, board or the like without sacrificing the paper or board strength.

When considering the patentability of the present invention, it should not be overlooked that real, non-trivial and unobvious advantages ensue when the size and pigment fractions are prepared **separately in advance**. Specifically, the pigment fraction, which is generally in practice more complicated to prepare, can be prepared

¹ Of course, if the Examiner's rejection is based on facts within his personal knowledge, then he is asked to provide an affidavit setting forth the same as required by 37 CFR §1.105(d)(2).

separately, which makes the preparation of the final size composition as a whole much easier. According to the present invention, therefore, a paper mill, for example, can purchase a "ready-made" dispersion of a pigment fraction, and mix it with the mill's basic size fraction. In this way the present invention enables the mill to make fast and simple property changes in the surface size composition by changing the pigment fraction in dependence on the paper or board quality being produced. According to the present invention, the properties of the surface size composition can be easily modified by changing the ready-made, pre-mixed pigment fraction, which is thereafter added to the size fraction to achieve the final surface size composition.

Applicants note that Aho et al does not disclose at all any size composition that arguably could be considered as corresponding to the presently claimed invention. Indeed, as noted previously, by the Examiner's own admission Aho et al does *not* disclose forming a separate pigment fraction in advance and then mixing such a pre-formed pigment fraction with a size fraction. Instead, Aho et al is concerned with a coating composition, which is applied onto the board. Thus, at best the coating composition contemplated by Aho et al may arguably be considered to correspond to only the pigment fraction of the presently claimed invention. Therefore, there is no teaching or suggestion in Aho et al that might possibly lead an ordinarily skilled person toward the presently claimed invention since Aho et al does not mention at all mixing of *separate* pigment and size fractions.

It should be noted that there exists in the art a clear and recognizable difference between size compositions and coating compositions. Size compositions generally comprise starch, carboxymethyl cellulose, polyvinyl alcohol, glucomannan or their mixtures. Coating compositions on the other hand typically comprise mineral substances, such as talc or kaolin, and a binder, which can be, e.g. a synthetic polymer or a latex. Surface size and coating compositions are also added to the paper in totally different amounts. Thus, the amount of size composition applied to the paper is

typically on the order of between about 0.5 to 3 g/m², whereas the amount of coating composition applied to the paper is typically 8 — 20 g/m². Coating compositions are therefore not generally applicable as size compositions, and teachings derived from coating compositions and their preparation cannot and would not “obviously” be applied to size compositions and their preparation by ordinarily skilled persons in the art.

It should also be noted that, in surface sizing compositions the dry content is typically (much) lower than 20%, whereas the dry matter content for coating compositions is usually 60% or greater. The application methods are also totally different. Specifically, surface sizing is typically performed by a film transfer technique whereas coating compositions are applied via blade coating techniques. Therefore the ordinarily skilled person would recognize that surface size compositions and coating compositions differ so much from each other that it is not obvious to apply teachings from coating to surface sizing, or vice versa. In other words, coating compositions are not analogous to the size compositions and as such, are not part of the “prior art” backdrop against which 35 USC §103(a) issues are to be determined.²

Withdrawal of Aho et al as a reference against claims 17-44 is therefore in order.

Neither Niinikoski et al nor Hormi cure the deficiencies of Aho et al discussed above. Thus, Even assuming that Niinikoski disclose the use of graft copolymers and Hormi et al discloses a cationic chemical employed in a papermaking process, the glaring deficiency of Aho et al would not be cured. That is, no disclosure or suggestion exists in such secondary references to Niinikoski et al and Hormi of a method of making a size composition by mixing together a size fraction comprised of a water-soluble principal component and the premixed pigment fraction as defined by the claims pending herein for consideration. Thus, even if one of ordinary skill in this art

² *Wang Laboratories Inc. v. Toshiba Corp.*, 24 USPQ2d 1767, 1773 (Fed. Cir. 1993).

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combined the teachings of Niinikoski et al or Hormi with Aho et al, the presently claimed invention would not result.

Every effort has been made to advance prosecution of the subject application to allowance. Therefore, in view of the amendments and remarks above, applicants suggest that this application is in condition for prompt allowance and official notice to that effect is solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



Bryan H. Davidson
Reg. No. 30,251

BHD:Imy
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100